Installation Instructions Safety Edges in accordance with 94/9/EC

Safe installation of Safety Edges in potentially explosive atmospheres (ATEX).

Before beginning with installation work, please read through these installation instructions carefully. The installation instructions only describe the additional measures and requirements which are to be observed in the event of installation in potentially explosive environments. In addition, the “Assembly Instructions for Safety Edges” apply.

Safety instructions

- Knowledge of the following standards is required: EN 13463-1, EN 50020, EN 60079, EN 954 and EN 1760-2
- Installation, assembly and commissioning may only be carried out by qualified specialists.
- Operation only by instructed personnel.
- Safety instructions are marked with the symbol ⚠ and must be observed.
- Safety instructions in the assembly and operating instructions of the Safety Edge,safety barrier and Control Unit must be observed.
- The relevant safety regulations must be observed.
- Failure to observe the safety instructions and safety regulations may lead to loss of life, injury or damage to property.
- In the case of use outside the European Union, the relevant valid regulations of the country of use must be observed.
- Keep the installation instructions for future reference.

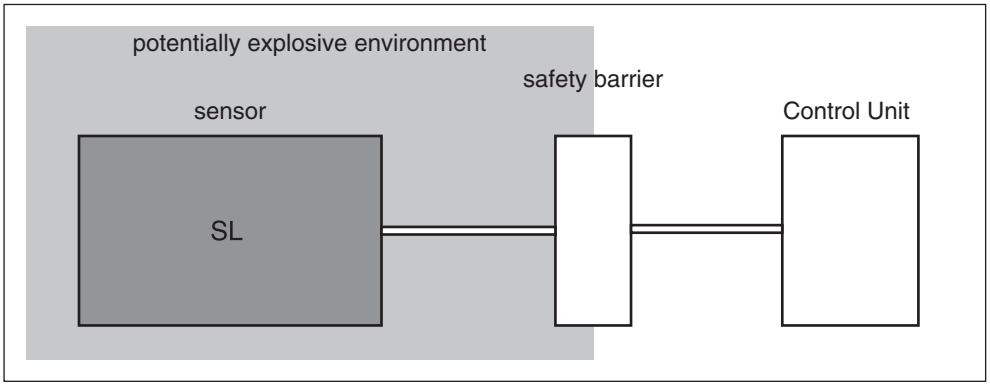
Use

The safety system of the Safety Edge in accordance with 94/9/EG consists of a sensor SL, aluminium profile, safety barrier and Control Unit.
The intrinsically safe (ib) sensor corresponds to equipment group II and equipment category 2G. It is suitable for explosion group IIC and temperature range T4 in accordance with 94/9/EC.

⟨Ex⟩ II 2G EEx ib IIC T4 -15 °C ≤ Ta ≤ +60 °C

The Control Unit is not installed in the potentially explosive environment. The safety barrier acts as an interface between the potentially explosive environment and the Control Unit.

Basic layout



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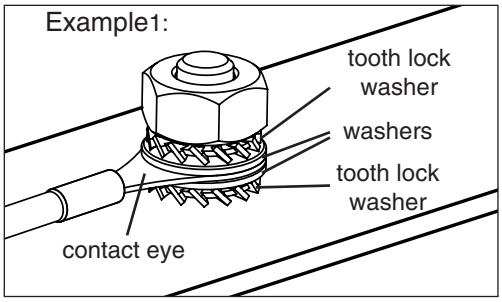
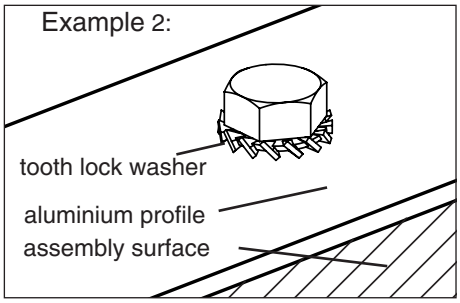
Assembly

For assembly of the aluminium profile and the sensor, please refer to the “Assembly Instructions for Safety Edges”.

Additional assembly steps for the equipotential bonding:
- The aluminium profile must be bolted to the earthed installation surface in such a way that the requirements of EN 60079-14 are fulfilled.





Fit type plate in immediate vicinity of sensor. Type plate must be clearly legible in installed state and assignment clearly indicated and the fixed position must be ensured.

Installation

Ensure equipotential bonding

- In the case of Safety Edges, type BK, equipotential bonding on the safety barrier must be ensured between the two channels.
- After installation, correct earthing of the Safety Edge and of the aluminium profile of the on-site equipotential bonding must be checked.

⚠ The Safety Edge may only be put into operation following a positive test result. Otherwise the intrinsic safety of the Safety Edge is not guaranteed.

Connect Safety Edge

Connect cable of the sensor in accordance with the operating instructions of the safety barrier or of the intrinsically safe Control Unit.
The cables must be laid in accordance with EN 60079-14 in a fixed position, sufficiently protected against damage and in a light blue protective tube.

⚠ The Safety Edge may only be supplied by separate intrinsically safe power circuits. Otherwise the intrinsic safety of the Safety Edge is not guaranteed.

Maintenance

The sensor is maintenance-free. Depending on the amount of use, the sensors are to be checked at regular intervals (at least once a month) for correct operation by activating them or by fitting the relevant test sample and for visible signs of damage.

⚠ Immediately put the Safety Edge out of operation as soon as damage is detected which could impair safe operation.

Modification, repair

The sensor must not be opened or structurally modified. Repairs may only be carried out by the Mayser service department.

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